

THE EXECUTIVE SUMMARY

OF

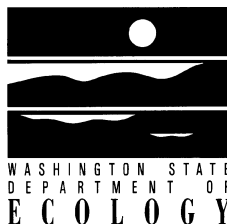
The Washington State Solid Waste Management Plan

PUBLICATION NUMBER 91-15
APRIL 1991



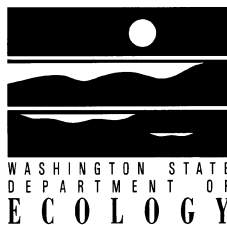


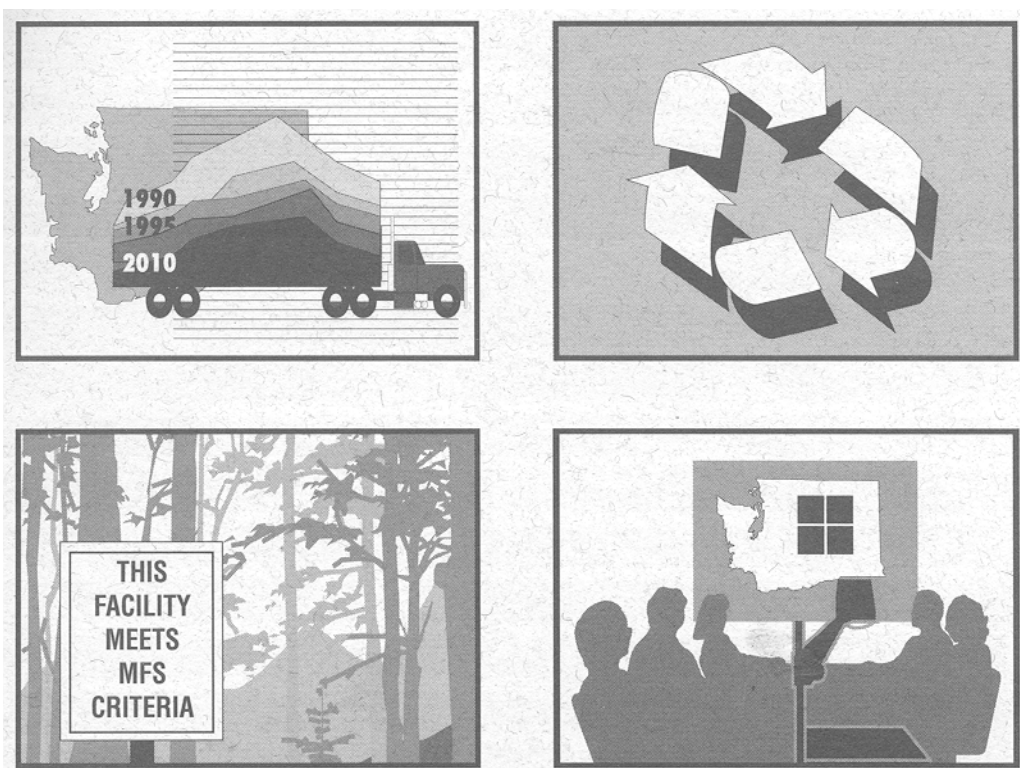
*Garbage, trash, debris – whatever you call it,
solid waste is a growing problem
of our modern society. ■ It's a problem
we must manage and ultimately try to avoid
creating in the first place.*



The State Solid Waste Management Plan was prepared by the Washington Department of Ecology with the assistance of R. W. Beck and Associates in January, 1991. This report is a summary of that plan. If you would like to receive a copy of the State Plan, contact: Department of Ecology, Publications, Mail Stop PV-11, Olympia, WA 98504-8711.

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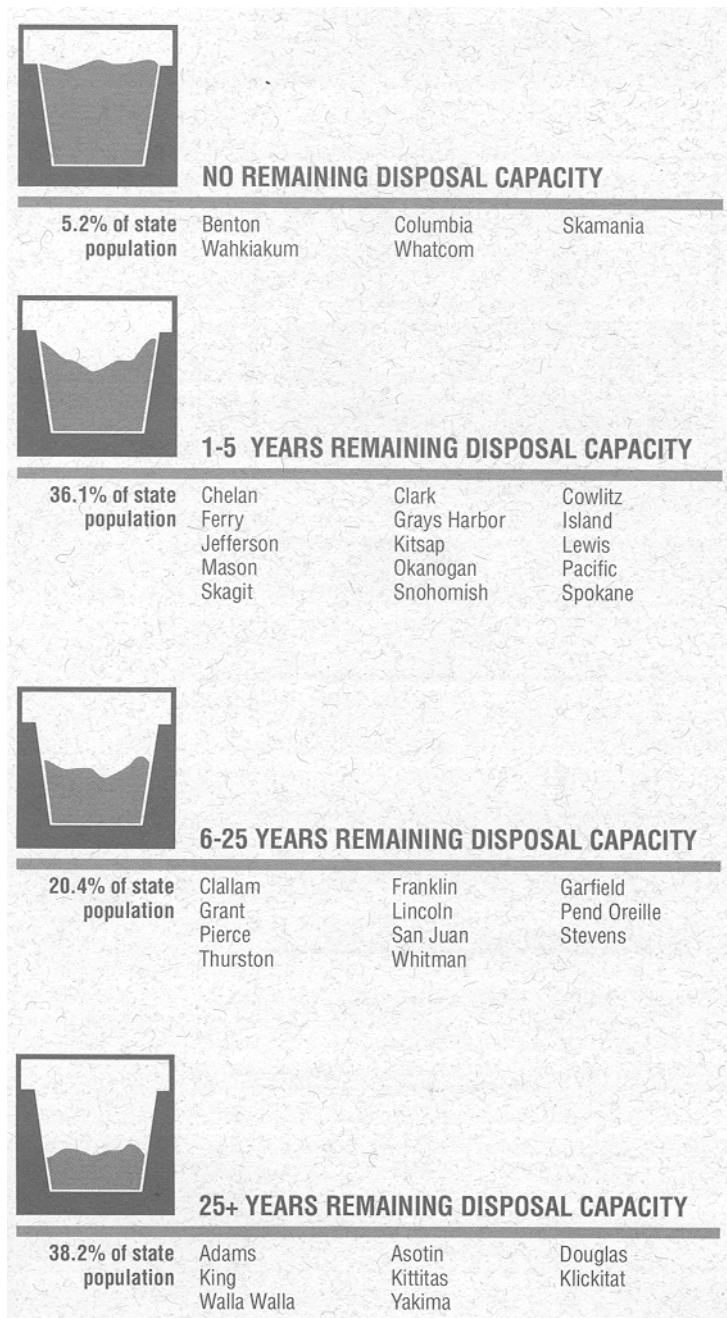
Why should we worry about waste?

Because we have so much of it.

We are generating enough solid waste in this state every year to cover all four lanes of I-90 from Spokane to Seattle five and a half feet deep. Divide Washington's daily production of solid waste by our population (4.8 million) and this amounts to each of us generating 7.2 pounds every day.

Because we're growing and our waste is growing right along with us.

Over the next 20 years our population will likely grow to 6.1 million. Without action on our part, our waste would likely grow to 9.2 million tons, the equivalent of 8.3 pounds per person per day. Without vigorous, widespread waste reduction and recycling, total waste generation could increase by 80% by 2010 – less than 20 years from now!



Because we have fewer and fewer places to put it.

About 40% of the state's population lives in counties with less than ten years' capacity remaining in local landfills. Finding new locations for landfills or waste-to-energy facilities (facilities that incinerate garbage and recover energy in the form of electricity, stream or both) is increasingly difficult.

Because it's the law.

The Washington State Legislature has been concerned enough about solid waste to pass far-reaching laws governing its management. The most recent of these laws, the "Waste Not Washington Act" of 1989, amended the Solid Waste Management Act and changed the way solid waste is managed in our state. This law also required the preparation of a Washington State Solid Waste Management Plan.

Because it is expensive.

Collecting, transporting and sorting solid waste, whether for disposal or recycling, costs a lot of money. It is expensive to build properly designed disposal facilities that protect human health and the environment, and meet Washington Department of Ecology (Ecology standards.

Because improperly handled solid waste changes our environment and degrades our quality of life.

In improperly constructed landfills, rainwater can mix with the garbage to concoct a soup called leachate. This can, and has contaminated groundwater in both eastern and western Washington. Decomposing garbage also creates methane gas that can be explosive if it mixes in certain concentrations with air. Waste-to-energy facilities require complex and costly pollution abatement equipment to control releases to the air. Litter and illegal dumping are a sign of our failure to respect and care for nature.

Because the materials we throw away are made from natural resources.

Materials we throw away as garbage—packaging materials made of paper or plastic, newspapers, office paper, paper plates, aluminum cans, glass bottles, plastic bottles—are all made from our natural resources, many of which have a finite supply. Why waste these resources by sending them on a one-way trip to the landfill?

The good news and the bad news

The Good News

Washington leads the nation in recycling with a rate of 28%. This is more than double the national average. Two Washington counties now recycle more than 30% of their solid wastes and 11 are recycling more than 20%.

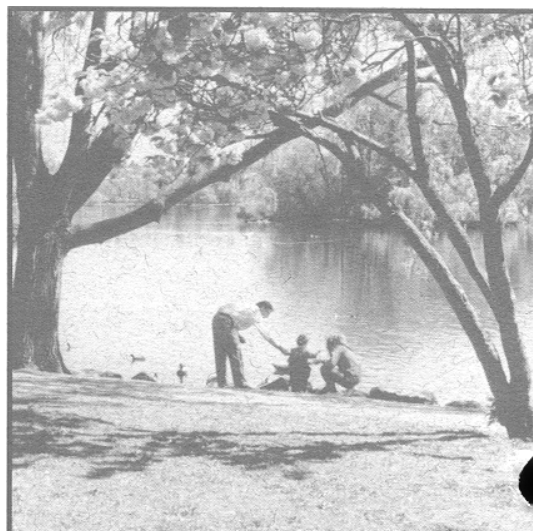
The opportunity to conveniently recycle is becoming increasingly available, and is encouraged by state law. The number of curbside recycling programs has increased significantly in the last three years. There are also more than 500 recycling centers and stations statewide, many of which pay for recovered materials.

Washington's citizens strongly support recycling as evidenced by high participation in recycling programs, above 80% in some areas. If waste reduction programs are convenient and well explained, people will support them and participate.

Markets for recyclable materials generated in Washington have remained relatively strong. However, to meet the future needs of our state, these numbers will need to expand. Support for further market development is strong as shown by the Legislature's formation of a state task force on marketing recyclable materials and this task force's vigorous work.

Capacity to process recyclables, particularly paper, is increasing throughout the Northwest. New processing technologies give promise of reusing and recycling a significantly larger proportion of our wastes than previously possible.

Ecology has defined environmental protection standards for the handling and disposal of solid waste. Already, many small, environmentally unsafe landfills have been closed. When fully



carried out, these standards, the Minimum Functional Standards for Solid Waste Handling (MFS), will protect public health and the environment and prevent the recurrence of past problems. Implementing these standards has also helped us to be more realistic about the true costs of managing solid waste.

We know more about solid waste and how to manage it properly than we ever have before. Ecology's "Best Management Practices Analysis for Solid Waste" (1988) and the nine issue papers prepared in conjunction with the State Solid Waste Management Plan give us a comprehensive understanding of our state's solid waste management system and the challenges we face.

The Washington State Legislature, through the amended Solid Waste Management Act, has provided clear direction and political support for progressive solid waste management by establishing waste reduction and recycling as the two top priorities for the future.

The Bad News

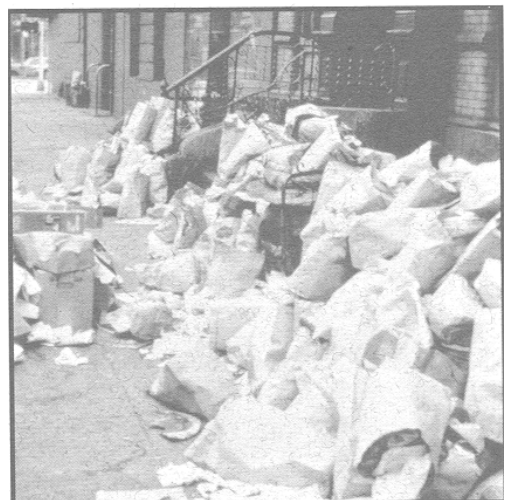
(or better put, the Challenge)

Even with current recycling levels, rapid population growth and economic expansion, particularly in the Puget Sound region, are causing the state's generation of waste to increase steadily.

Not everyone has developed a recycling ethic. Many people still do not sort out recyclables, throwing these valuable materials in with non-recyclables, making it all waste. Some businesses and industries believe it is too costly to recycle. Litter on the state's highways, much of it recyclable, has increased in recent years.

Markets and collection systems for some common recyclables, such as plastics are still in their infancy. Shipping costs from rural central and eastern Washington counties currently make the recycling of some materials uneconomical.

Most of the solid waste disposal facilities in the state are not fully complying with MFS requirements to protect public health and the environment. In some counties, local disposal capacity is rapidly diminishing. Finding sites for solid waste management facilities remains as controversial as ever.



A brief history of solid waste management in Washington

BEFORE 1969

No statewide solid waste planning

- Open burning and uncovered dumps are prevalent

1969

Solid Waste Management Act (Chapter 70.95 RCW):

- Local health departments given authority to issue permits for solid waste facilities
- State Solid Waste Advisory Committee established
- Local governments directed to plan for solid waste management
- Open dumps closed or converted to sanitary landfills

1972

Ecology issues first Solid Waste Management Plan

- Local planning requirements established
- Guidelines developed for handling and disposal of residential and commercial wastes
- Ecology issues Minimum Functional Standards (WAC 173-301)
- Open burning prohibited
- Standards established for all disposal facilities

1976

Congress passes Resource Conservation And Recovery Act (RCRA)

- Washington State amends Solid Waste Management Act to include hazardous waste management
- “Waste management” given priority over “disposal”

1980

Ecology issues second Solid Waste Management Plan

- Collection and disposal systems addressed
- Hazardous, residential and commercial wastes included

1984

State Solid Waste Management Act amended

- Waste management priorities established as:
 1. Waste reduction
 2. Waste recycling
 3. Energy recovery or incineration
 4. Landfilling
- Local solid waste advisory committees (SWACs) required to assist counties in developing comprehensive solid waste plans

1985

New Minimum Functional Standards (WAC 173-304) are issued

- Siting criteria, design standards, closure and post-closure requirements included

1988

Ecology issues Best Management Practices Analysis for Solid Waste (BMP)

- State solid waste composition and management methods analyzed
- Waste reduction and recycling employed as basic strategies of waste management

1989

State legislature passes “Waste Not Washington Act”

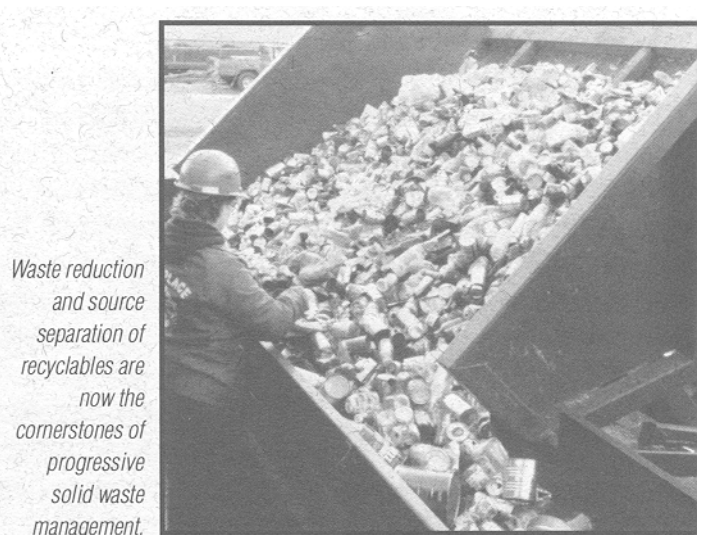
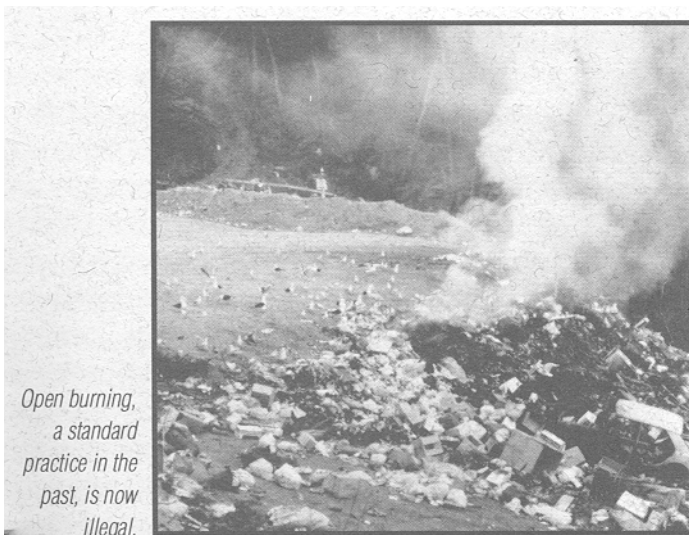
- 50% reduction and recycling goal by 1995 established
- New solid waste management priorities established as:
 1. Waste reduction
 2. Recycling, with source separation preferred
 3. Incineration or landfilling of separated waste
 4. Incineration or landfilling of mixed waste
- Ecology directed to prepare a new State Solid Waste Management Plan

A time of transition

This is a time of transition for solid waste management in Washington. In the past, the solid waste management capabilities of municipal and county governments, who bear the primary responsibility for managing solid waste in our state, have been geared primarily to disposal. The Solid Waste Management Act redefined this responsibility. Waste reduction and recycling are now the highest priority solid waste management methods.

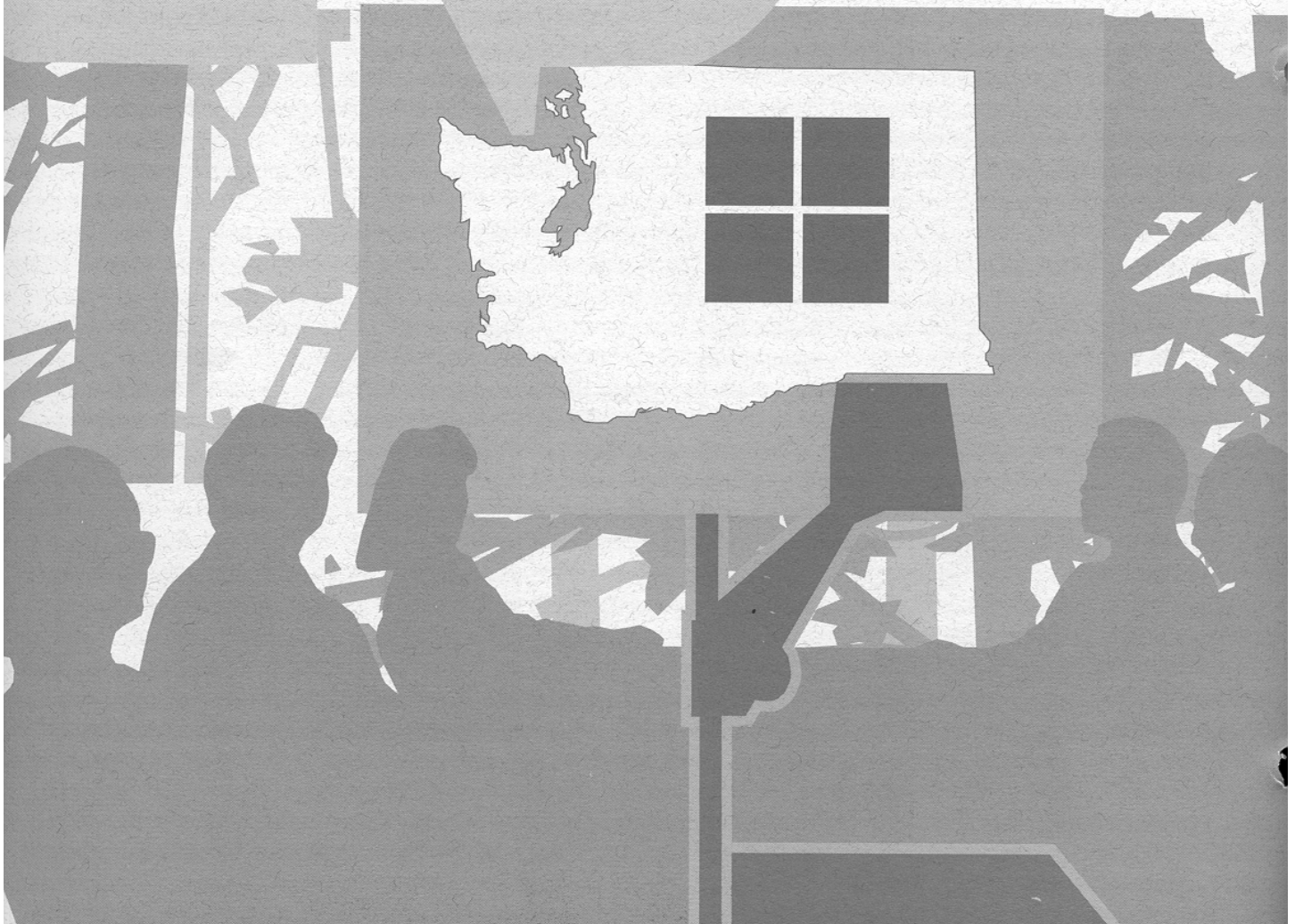
Some local governments, faced with the closure of their landfills, are also grappling with the complex challenge of finding disposal capacity outside of their jurisdictions. Solid waste management is becoming “regionalized” with many cities and counties considering “long hauling” as an answer to their solid waste problems.


Both government and private enterprise are seeking ways to expand markets for recyclable materials. All Washington citizens are being asked to reevaluate their attitudes and behavior concerning what they buy and what they throw away.



Where are we going and how do we get there?

The State Solid Waste Management Plan is a guide for solid waste management in Washington for the next 20 years. What must we achieve between now and 2010? To answer this question, Ecology met with the public during two series of meetings throughout the state, and sought the continuing advice of the Washington State Solid Waste Planning Advisory Committee (a subcommittee of the State Solid Waste Advisory Committee). Ecology also prepared nine issue papers that analyze all aspects of Washington's solid waste management system. The results of this consultation and research are the following goals and recommendations for action.





**THIS
FACILITY
MEETS
MFS
CRITERIA**

1990

1995

2010

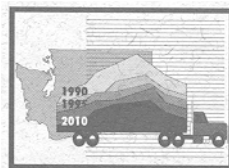
What are the goals of the Solid Waste Management Plan?

Washington has long been a leader in solid waste management, from the passage of the first State Solid Waste Management Act in 1969, to leading the nation in recycling in 1990. Ecology developed the State Solid Waste Management Plan to guide Washington's continued leadership over the next 20 years. In order to be both forward-looking and practical, the State Solid Waste Management Plan sets goals and recommends ways to reach these goals.

Chief among the goals requiring a concerted effort is the goal of reducing and recycling 50% of the state's wastes by 1995.

Many of the goals can and should be achieved well before 2010. Acting on the many recommendations will require increased commitment, both in effort and finances, from citizens, private enterprise and government.

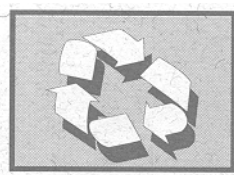
Our overriding goal is that all solid waste in Washington State (including industrial waste) will be managed by the highest priority method possible, as specified in the Solid Waste Management Act, to protect the environment and human health.



Waste Reduction

Everyone practices waste reduction, with waste generation per capita decreasing annually.

Within 20 years, citizens, the private sector and governments, will have established procedures and habits that reduce both the volume and the toxicity of waste. All will continually strive for annual decreases in waste generation. This reduction will result from economic incentives and from changes in purchasing habits, in manufacturing, and in wasteful attitudes.



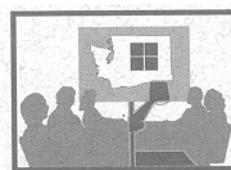
Recycling

Everyone recycles all solid waste possible.

Within 20 years, recyclability will be a prime criterion for the selection of products at the time of purchase. When a product has fulfilled its primary function, if at all possible, it will be recycled. Recycling opportunities will be available to all citizens, the private sector and government agencies.

The use of recycled and recyclable materials is preferred, with markets for all recyclables established and reliable.

Within 20 years, manufacturers will use recycled materials in preference to virgin materials. Products and packaging will be recyclable. Citizens, the private sector and government agencies will prefer to purchase goods containing recycled materials, and products that are themselves recyclable. Markets for recyclables will be established and reliable ensuring that all recyclable materials are used and that none become merely segregated trash.



Solid Waste Management

Resources are available to manage solid waste with the highest possible priority method.

Within 20 years, the true costs of managing solid waste, including the cost to the environment, will be known and acknowledged. Funds will be available to provide the best solid waste management practices. The priorities for the collection, handling and management of solid waste established by the Solid Waste Management Act will be fully implemented.

Solid Waste laws and regulations are clear, consistent and workable, and provide each level of government with the authority it needs to manage solid waste properly.

Within 20 years, the laws governing solid waste management will include appropriate provisions for all aspects of the solid waste system needing regulation. Each level of government will have the authority it needs to undertake its appropriate responsibilities.

All levels of government, citizens and the private sector work cooperatively.

Within 20 years, citizens, the private sector and all levels of government will be cooperating in planning and carrying out economical solid waste management that fulfills the priorities of the Solid Waste Management Act and protects the environment and human health.

Disposal Methods

Waste is disposed of only after removal of all reusable, recyclable and compostable material.

Within 20 years, any waste which does reach a landfill, a waste-to-energy incinerator, or other disposal facility, will contain no material that is reusable, recyclable or compostable. These materials will be separated at the source of generation.

Disposal practices protect the environment and human health.

Within 20 years, any waste remaining after reduction and recycling will be managed by the highest priority method possible. All solid waste facilities, including composting facilities, recycling centers, transfer stations and disposal facilities such as landfills and waste-to-energy incinerators, will be designed and operated to protect the environment and human health. All past problems associated with disposal will be corrected.

Achieving Washington's 50% goal by 1995

The Solid Waste Management Act sets a goal of recycling 50% of the state's solid waste by 1995. This has been interpreted to mean reducing the quantity of waste going to final disposal by 50%.

Can Washington achieve the 50% goal by 1995?

Yes, achieving the goal is possible, but it will mean doubling current efforts. The goal can be met:

- If governments at all levels vigorously promote voluntary residential and commercial recycling,
- If reliable, healthy markets are available for all recyclables,
- If residential and commercial waste generators significantly reduce waste and increase recycling,

To determine the best way to achieve the 50% goal, Ecology evaluated a number of waste reduction and recycling strategies. The strategy, "An Aggressive Effort with Urban Emphasis," was selected as the most likely to succeed in reaching the 50% goal.

Implementing this strategy, the analysis estimates, would reduce the quantity of waste going to disposal by 53%.

How to get this strategy to work.

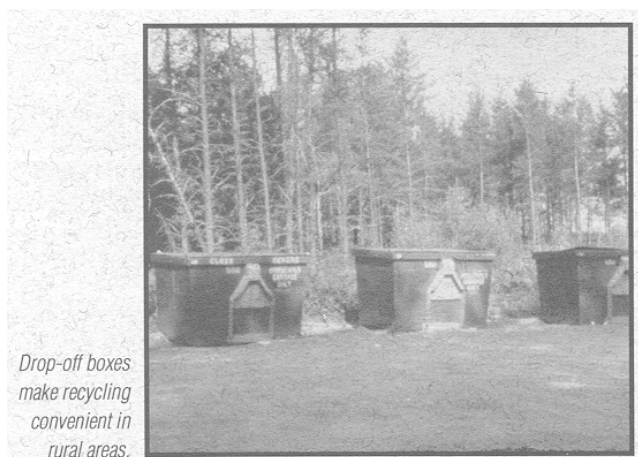
Well-designed programs and broad public support for this strategy will be needed to nearly double current waste reduction and recycling rates. This broad public support means people making careful purchasing decisions, consistently choosing environmentally benign products and materials, reusing materials whenever possible and actively recycling.

The widespread participation of urban residents and the private sector is particularly important to the success of this strategy. Education and information are the keys to participation, and resources are needed to provide successful educational programs.

Vigorous implementation of voluntary programs will be needed to attain the highest possible participation by citizens, the private sector and government agencies. These programs will involve.

- Extensive education and outreach to encourage reduction, reuse, recycling, waste exchange and composting.
- Rates that stimulate participation in curbside and commercial recycling including yard waste composting programs and the sorting out of recyclables by those who haul their own wastes, and
- A forceful commitment of public resources to ensure that programs are fully implemented by the target year 1995.

Healthy, reliable markets for recyclable materials are essential to the success of this strategy. The Legislature has given state government the primary responsibility for developing markets. Local governments, businesses and residents play a central role by buying products and materials that incorporate recycled materials. State and local policies need to support the development of new businesses that use locally generated recyclables.



Drop-off boxes
make recycling
convenient in
rural areas.

Who is responsible for meeting the statewide goal of 50%?

While the statewide goal is 50%, not all communities can be expected to reach this level. Some urban communities must do better, through curbside programs, private sector recycling, yard waste collection and other efforts.

In sparsely populated, rural areas, where curbside collection is not practical, implementing recycling programs takes a different focus. In helping the state reach our goal, rural areas need to provide drop-off boxes and recycling opportunities at commercial centers as well as at transfer stations and disposal facilities.

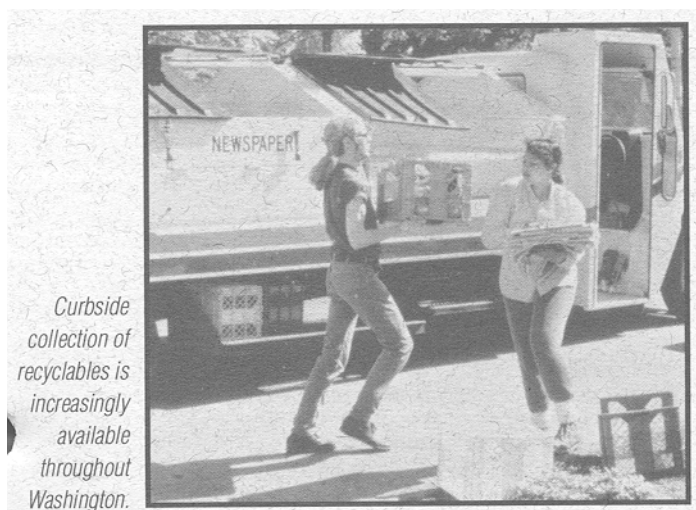
When the 50% goal is reached in 1995, some areas will be reducing and recycling well over 50% of their waste, while others will have achieved lower rates. Each jurisdiction must set and attain its own waste reduction and recycling goals while it strives to meet, and exceed, the statewide goal. Attaining and surpassing the 50% goal will require a concerted effort and a substantial commitment of resources by citizens, private enterprise, and local and state government in Washington.

How will we know if we are meeting the 50% goal?

Ecology will evaluate information statewide to monitor progress toward the 50% goal. In doing so, Ecology will determine how much waste is recycled, the overall recycling and disposal rates, and which sectors to target to increase recycling. Local governments will be able to use this information to measure progress toward their specific goals.

What actions need to be taken to achieve the 50% goal?

- Adopt the strategy “an Aggressive Effort with Urban Emphasis” for meeting the 1995 50% waste reduction and recycling goal.
- Support aggressive governmental efforts to ensure high participation in waste reduction and recycling programs
- Encourage aggressive development of waste reduction and recycling programs to serve the nonresidential sector.
- Undertake ambitious, long-term market development for both high- and low-value recyclable materials.



Waste Reduction

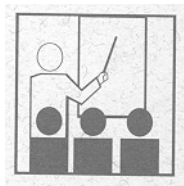
Goal: *Everyone practices waste reduction, with waste generation per capita decreasing annually.*

The Solid Waste Management Act states, “Waste reduction must become a fundamental strategy of solid waste management.” Decreasing the amount of waste generated means less waste requiring recycling, landfilling, incineration, or processing by other methods. Waste reduction reduces costs to society by conserving natural resources and landfill capacity. Reducing waste lowers costs for individuals and industry by decreasing the use of collection and transportation systems. In addition, the quantity of toxic material released into the environment is diminished, decreasing cleanup costs and damage to natural systems and human health.

Individuals, households, businesses, industries and governments can reduce waste in a number of ways. Some of these are:

- Buying durable products.
- Finding alternative uses for packages and containers.
- Reusing products and packages.
- Repairing instead of disposing.
- Composting organic material.
- Using reusable containers, shipping and packing materials.
- Instituting variable waste disposal rates, based on the amount disposed (“Pay as you throw.”) The less waste produced, the lower the fee.
- Allowing tax credits or exemptions for companies and institutions that follow specific waste reduction procedures.
- Banning certain packaging that impedes or blocks achievement of waste reduction goals.

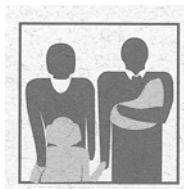
What actions need to be taken to achieve our waste reduction goal?



Combined Efforts

All levels of government and the private sector should cooperate in developing, implementing and funding waste reduction education and information programs.

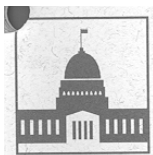
State and local governments and the private sector should stimulate waste reduction in the private sector.



Citizens

Citizens should attend meetings and public hearings to learn about, develop and participate in waste reduction programs in the community.

Citizens should learn how to reduce waste and should practice waste reduction at home and at work.



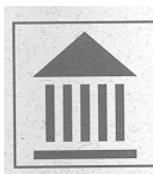
State Government

Ecology should monitor waste generation rates to ensure that the state's waste reduction priority is being implemented.

All state government facilities should complete waste reduction and recycling plans, integrate those plans with local comprehensive solid waste management plans and report progress annually.

The Department of General Administration and Ecology should make the comprehensive list of substitutes for toxic, disposable and nonrecyclable products available to local governments and the private sector.

Ecology should continue to provide technical assistance to help local governments and private facilities conduct waste reduction audits, prepare waste reduction and recycling plans and develop tracking systems.



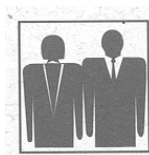
Local Government

Local governments should require nonresidential customers served by the local solid waste collection system to meet waste reduction and recycling criteria specified in local comprehensive solid waste management plans.

After July 1, 1993, local governments should consider banning certain packaging if that packaging impedes achieving waste reduction goals.

Local governments should continue to lead in reducing waste in their jurisdictions.

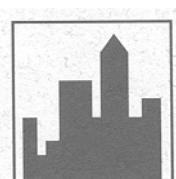
Responsible entities should set garbage rates to encourage waste reduction.



Legislature

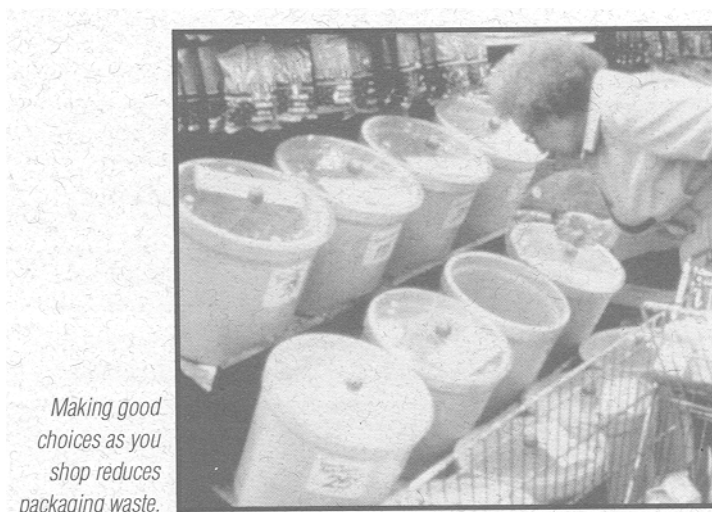
The Legislature should allow the "the ban on bans" to expire in 1993.

The Legislature should provide economic incentives so as to reduce both the volume and toxicity of wastes.



Private Sector

By 1993, nonresidential waste generators should prepare internal waste reduction and recycling plans to assist the state in reaching the 50% waste reduction and recycling goal by 1995.



Making good choices as you shop reduces packaging waste.

Recycling

Goal: *Everyone recycles all solid waste possible.*

Recycling, like reduction, requires changing individual purchasing and disposing habits. When buying a product, we need first to consider if the product is made from recycled materials and if it can be recycled. Recycling should become second nature, so that materials are only disposed of as a last resort. Education programs will help us shift from a “throw-away” society to a “conserving” society.

Recycling is becoming increasingly important in solid waste management as communities, private enterprise and governments battle the high cost and environmental consequences of solid waste disposal.

Recycling conserves resources. Most processes that use recycled materials as feedstock use considerably less energy than comparable manufacturing processes using virgin materials.

Curbside and drop-off programs remove common recyclables and yard waste from the waste stream. Separating recyclable materials at the source, as emphasized by the Solid Waste Management Act, is more efficient and generates cleaner and thus more valuable materials than sorting after recyclables and wastes have been thrown away together.

Incentives and penalties can increase the effectiveness of voluntary programs. To achieve higher participation in recycling programs, mandatory participation may be required.

Some areas, especially rural communities, may consider cooperative, regional approaches to separation and handling of recyclable and compostable materials. Consolidating recyclable materials allows the accumulation of marketable quantities.

In many communities solid waste generated by the private sector comprises one-half or more of the total solid waste stream. Therefore, developing sound business and industrial recycling programs is crucial.

Recycling is not trouble-free. Curbside collection of recyclables involves significant costs and the effects of replacing one collection truck with two or three is not entirely known. Also, some recycling processes produce air, water and land pollution. Many also produce waste products that require disposal. Even though the pollution produced may be considerably less than that generated by processes using virgin materials, recycling has its own environmental consequences.



Goal: *The use of recycled and recyclable materials is preferred with markets for all recyclables established and reliable.*

Creating markets for recyclable materials depends on citizens, businesses and governments purchasing products with recycled content and on manufacturers using recycled materials as feedstock. The resulting products should also be recyclable.

In general, Washington enjoys favorable market conditions for a variety of recyclable materials. As recycling rates continue to rise, however, there will be an increasing need for new, expanded and reliable markets. Some of the challenges of developing markets for recyclables are the high costs for moving recyclable materials to markets, the low demand for recyclable materials caused by limited or inconsistent supply, competition with virgin materials, and the low demand for products made with recycled materials because of the perception of lower quality or performance.

The State Solid Waste Management Plan identifies the following materials as being in particular need of market development. Without markets for these and other recyclable materials, we will not meet our 50% goal:

- Mixed waste paper
- Plastics (PET and HDPE)
- Organics (including both yard and wood waste)
- Used motor oil
- Tires

Here's what you can do:

Participate in local recycling programs, such as curbside pickup, drop-off or buy-back centers.

Participate in hazardous waste collection programs.

Choose products that contain recycled content and are recyclable.

Encourage friends, neighbors, businesses and government agencies to recycle.

Urge local retail businesses to stock products that contain recycled content and are recyclable.

form a "waste audit" that examines all opportunities to reduce waste and increase recycling.

Set up recycling programs in businesses and institutions for office paper, aluminum cans and other readily recyclable materials.

Encourage procurement policies that favor recycled and recyclable materials and products.



What actions are needed to achieve our recycling goals?



Combined Efforts

All jurisdictions should institute procurement policies favoring recycled products. Procurement percentages should increase as products containing recycled materials become more available.

All levels of government should cooperate in developing, implementing and funding educational, informational and promotional programs for the public and solid waste managers concerning recycling and composting.

All governmental jurisdictions and the private sector should develop and support public education and information programs to promote the use of recycled and recyclable material.

State and local governments and the private sector should implement programs to stimulate business recycling.



State Government

Ecology should monitor implementation of local comprehensive solid waste management plans to measure the progress of statewide recycling.

Ecology should continue providing financial and technical assistance with recycling and composting to governments and the private sector.

All governmental agencies should develop and implement preferential policies for compost.

To support local policies, Ecology should develop quality control standards for compost, and environmental standards for compost facilities.

The Washington State Parks and Recreation Commission and the Department of Transportation should provide recycling opportunities in state parks, parkways and at highway rest stops.

A representative should be established within the Department of Trade and Economic Development (DTED) to assist the private sector in developing markets for recycled materials.

Citizens

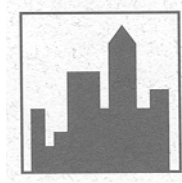
Citizens should attend public meetings and hearings to learn about, develop and participate in community recycling programs.

Citizens should recycle at home and at work.
Citizens should insist on recycling programs if not now available.



Local Governments

Local governments, working with state government and the private sector, should make recycling and composting opportunities readily available to all residential, commercial and institutional customers.



Private Sector

The state-level committee or authority responsible for developing markets for recyclable materials should negotiate voluntary agreements with industry to significantly increase industry's use and production of materials with recycled content. If voluntary agreements can not be reached, the Legislature should mandate requirements.

Legislature

The Legislature should amend evaluation criteria for grant and loan programs to support



innovative recycling efforts.

The Legislature should establish a state-level committee or authority responsible for developing markets for recyclable materials. This authority should provide technical assistance and research support, in cooperation with DTED and Ecology, to business, industry and governments.

Disposal Practices

Goal: *Waste is disposed of only after removal of all reusable, recyclable and compostable material.*

Traditional solid waste management has centered on disposal, with little emphasis on waste reduction and recycling. Although waste reduction and recycling are now the two highest priorities for solid waste management, and should receive emphasis in planning and implementation, the problems associated with disposal still require effective response. These problems include dwindling disposal capacity, improper closure of facilities, and continuing disposal practices that are hazardous to the environment and human health.

The first step in changing the orientation of solid waste management is to dispose of waste only after waste reduction and recycling. Though some past problems still await solution, waste reduction and recycling will diminish future problems by decreasing the amount of waste requiring disposal.

Goal: *Disposal practices protect the environment and human health.*

To assure environmentally sound solid waste handling, several steps must be taken:

All facilities must be issued permits and meet the Minimum Functional Standards for operation, closure and post-closure care.

Waste handling facilities must be designed to protect the environment and human health, not only during operation, but also after they have closed. For this reason, Ecology developed the Minimum Functional Standards for Solid Waste Handling (MFS). Jurisdictional health departments are responsible for issuing permits and enforcing compliance with the MFS.

Local jurisdictions must have the resources to close and provide post-closure care for disposal facilities.

Proper closure of disposal sites and post-closure maintenance are costly. The intent of the MFS closure requirements is to prevent future problems, such as methane gas migration and groundwater contamination. Landfills now in operation are required to have reserve accounts to pay for proper closure and post-closure maintenance.

Because of the absence of standards in the past, many former disposal sites may pose future threats. Questions arise as to how these landfills can be closed properly, who is responsible for closure and maintenance, and who pays.

Large public or private disposal facilities must be developed in ways consistent with state priorities.

Many counties have no more than a few years' disposal capacity remaining and siting a new disposal or waste processing facility would be difficult. In addition, the cost of constructing facilities to meet the MFS may make it difficult to replace existing disposal facilities. This is why many counties are considering solid waste management that involves regional planning or long-distance hauling to disposal facilities outside their area. There has already been significant private initiative in Washington and Oregon to develop large facilities capable of handling wastes from several counties.

"Large regional facilities" may refer to landfills or waste-to-energy plants. In the future, large regional mixed waste processing or composting facilities may also be developed.

As counties increasingly depend on a small number of large, privately owned disposal facilities, state and local officials will have to ensure that the public's interest in economical and environmentally sound solid waste management is protected. Conflicts may arise when local officials work to increase waste reduction and recycling, and owners of large facilities seek profits by filling disposal capacity quickly.

Counties should plan for 20-year disposal capacity.

Local governments should show that the solid waste management systems proposed in their comprehensive solid waste management plans will provide dependable handling, processing and disposal of solid waste throughout their plans' 20-year period. This is especially important in relation to large regional facilities that provide disposal service for multi-county regions for many years. An interruption in service could leave several communities without a primary means of disposal. This makes planning an alternative disposal location particularly important.

Illegal disposal and littering must be eliminated.

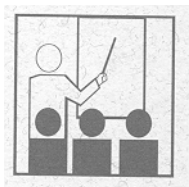
Illegal disposal is disposing of waste in any place other than an approved disposal facility, or in a manner inconsistent with state law. Many local governments report a connection between higher tipping fees and increased illegal disposal. The supposition is that as conventional disposal becomes more expensive, some people resort to illegal dumping along roadsides or in remote places. Closure of a disposal facility may also lead to increased illegal dumping.

It is difficult for local governments to enforce laws against illegal disposal because the owner of the property where the waste is found is often not the source of the waste. In addition, the justice system is over-burdened, and some prosecutors and county officials may be reluctant to stigmatize local residents with a criminal conviction for what is seen as a minor infraction.

The quantity of litter found along Washington state roadways has increased in the last several years. Much accidental litter comes from unsecured loads and the use of truck beds as trash receptacles. Requiring the covering of loads would reduce litter from this source.

Absence of a strong environmental ethic and an inclination to place personal short-term financial gain above the good of the community and the environment contribute to these problems. Education may ultimately be the strongest force against illegal disposal and littering.

What actions need to be taken to reach our goals concerning disposal practices?



Combined Efforts

State and local government and the private sector should educate the public about environmentally sound waste disposal.

Ecology, local governments and private waste management facility operators should bring all facilities into compliance with the Minimum Functional Standards and clean up illegal dumps.

A regional working group should be formed with representation from Washington, Oregon and Idaho to study regional solid waste management.

Local governments and private waste management companies should ensure that toxic and hazardous materials do not enter waste-to-energy facilities or landfills.



State Government

Ecology should continue to revise and update the Minimum Functional Standards.

Ecology should continue providing technical support and education to local officials concerning solid waste management.

Ecology should assess EPA Subtitle D regulations to determine if Washington's system of permitting will comply with national standards.



Local Governments

Local governments, in planning for local or regional disposal, should ensure that the highest solid waste management priorities are implemented.

In their comprehensive solid waste management plans, local governments should plan for 20 years' disposal capacity.

Procedures should be changed so that Ecology may assist local health departments with specific enforcement actions.



Legislature

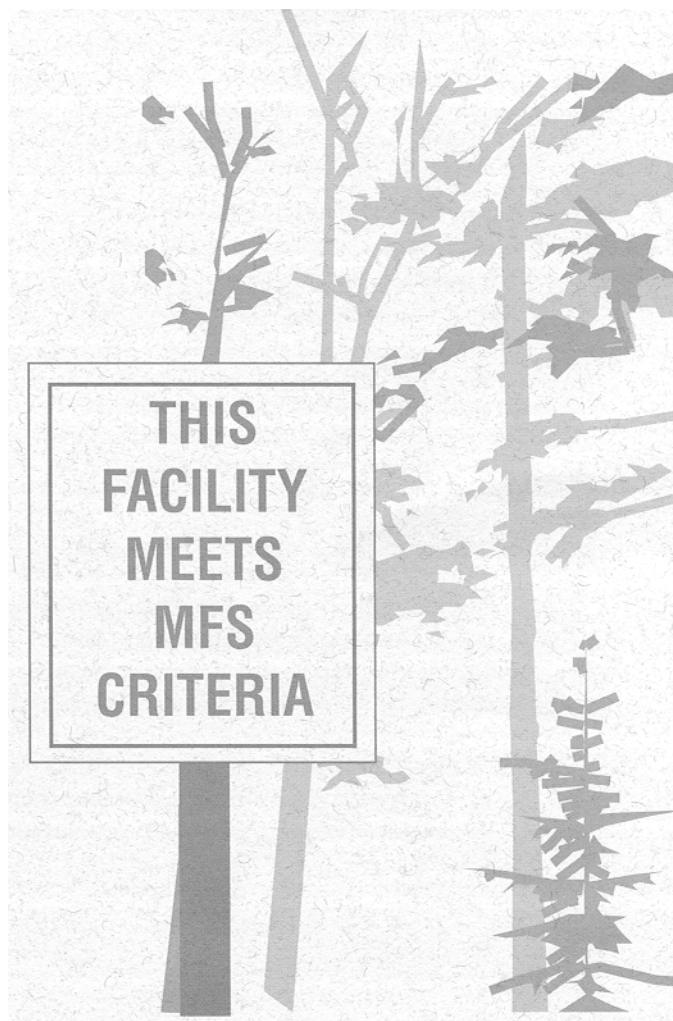
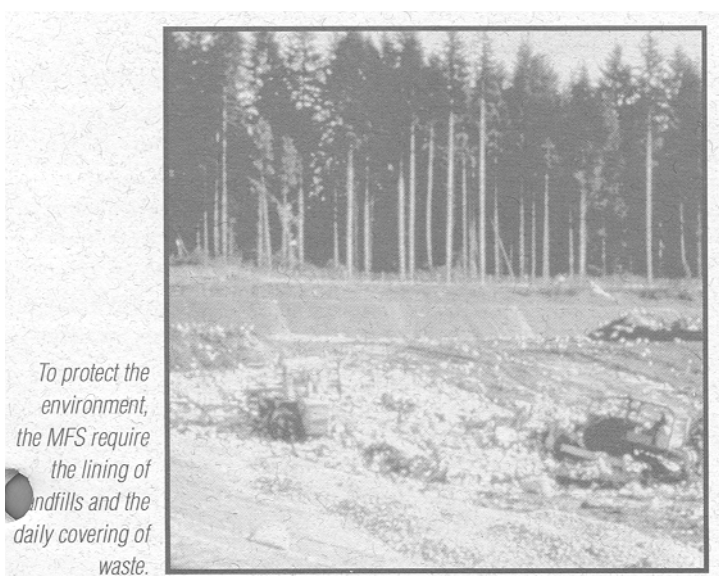
The Legislature should consider giving Ecology the permit issuing and enforcement authority for regional solid waste management facilities.

The Legislature should establish requirements for covered loads.



Private Sector

Private companies that own and operate disposal facilities should be responsible for meeting the state's solid waste management priorities.



Solid Waste Management

Goal: *Resources are available to manage solid waste with the highest possible priority method.*

Water resources are needed?

In determining the true costs of solid waste management, several responsibilities that may not have been included in the past must now be taken into account. Educating the public in waste reduction and recycling is as essential as the financing of collection and processing systems for recyclable materials. Markets for recyclables must be developed. Research is needed to find new ways to recycle materials and use recycled products.

Another necessary expense of solid waste management is paying well-trained state and local staff to review permits, inspect facilities, enforce regulations, produce plans and planning guidelines, provide technical assistance and educate the public.

Providing equipment for solid waste handling, including collection, transfer and disposal, also requires financial resources.

Reaching the goal of managing waste with the highest priority method also means bringing all waste handling facilities into compliance with the Minimum Functional Standards (MFS). Managing waste properly means cleaning up and correcting past problems, including illegal dumps, and improperly closed landfills. Clean up and remediation are expensive and should be considered as necessary costs of solid waste management.

The costs to the environment also need to be considered. Environmental cleanup is very expensive. It is much cheaper, for example, to keep leachate out of ground water than it is to remove the pollutant after the water has been contaminated.

At this time, not all costs of solid waste management are included in fees and rates, nor have all costs been clearly identified. The total costs of solid waste management need to be determined so that solid waste fees and rates can reflect these true costs and the system can pay for itself.

Providing resources

Officials need to be willing to raise rates fees to cover true costs, although doing so may not be politically popular.

Cities and counties need to be able to raise sufficient funds by means of an adequate rate base. Sources of funding, such as increased rates, packaging taxes, fees on regional facilities and bonds passed by referendum, should be analyzed in terms of potential return, and effect on the waste management system and other essential services.

In addition to money, technical resources are needed to reach our goals. Technical resources consist of information and the people who know how to use it. Local governments, businesses and private solid waste management consultants need many kinds of information in order to assess solid waste management needs, plan programs, budget for capital improvements, monitor progress, and develop effective long-term waste reduction and recycling strategies. Governments' education and technical staff are not always sufficient. Funding will be necessary to provide both the required information and the technical staff.

Goal: *Solid waste laws and regulations are clear, consistent and workable, and provide each level of government with the authority it needs to manage solid waste properly.*

In order for Washington's solid waste management system to operate effectively, federal, state and local statutes and regulations must be easily understood and followed. These statutes and regulations must provide each level of government with the authority it needs to enact the best solid waste management practices.

In order to reach this goal, laws and regulations need to be clearly written. This will lessen the likelihood of misinterpretation. Vague language, terms whose definitions vary in different laws and regulations, and portions of laws that conflict should be clarified and standardized. In some cases, gaps in the law may hinder responsible solid waste management.

Laws should also provide the necessary authority to the appropriate level of government. The degree and type of authority needed by each level of government should be established. The responsibility for regulating solid waste handling facilities needs to be defined. Each jurisdiction's role needs to be clearly described and every other jurisdiction needs to understand and support that role. Then all levels of government need to cooperate to manage solid waste properly.

Goal: *All levels of government, citizens and the private sector work cooperatively.*

Cooperation implies voluntary participation in promoting effective, environmentally-sound solid waste management. Since solid waste is managed by a diverse group of organizations, it is important that these organizations clearly communicate their needs and concerns, and work together in implementing solid waste management plans. It is essential that the public be involved because the successful management of solid waste rests ultimately on the informed actions of individuals.

The first step in reaching this goal is to involve the public throughout solid waste management decision-making. Local governments need to inform people about how they can get involved in the solid waste management planning process. The public needs access to decision makers through public meetings and hearings. Surveys, newspaper inserts, school programs, public relations campaigns, television and radio commercials all can be employed to inform and involve a wide range of citizens. Good communication will improve plans and increase public understanding and support.

Governments and the private sector also must cooperate if solid waste is to be safely and economically managed. Without mutual understanding and assistance in waste reduction, recycling, collection, processing, marketing and disposal, the goals of the State Solid Waste Management Plan will not be met.

What actions need to be taken to reach our solid waste management goals?



Combined Efforts

All parties should cooperate in providing public information and education programs.

State and local governments should encourage public involvement during all phases of the solid waste management planning process.

Citizens and the private sector should be made aware of the costs of solid waste management, and all governments and solid waste management businesses should adopt rates to cover these costs.

A state-level task force should be formed to review proposed changes in state statutes and regulations to ensure that the Solid Waste Management Act is implemented.



Citizens

Citizens should educate themselves about solid waste management and be willing to work towards constructive, realistic solutions.

Community groups and individuals should regularly communicate with government and private waste management businesses to convey both what is right with solid waste management as well as what needs improving.

State Government

Ecology and the Washington State Utilities and Transportation Commission should develop a way to determine the total cost of solid waste management.

Ecology should be allocated additional resources. These resources should be dedicated to providing additional technical assistance, training and education to local governments so these jurisdictions can effectively regulate local solid waste management facilities.

Ecology should evaluate the findings and recommendations of the Enforcement Study prepared by the Institute for Urban and Local Studies, Eastern Washington University.

Ecology should monitor the implementation of local solid waste management plans to see that the state's goals and priorities are being met.

Ecology should develop and maintain a comprehensive database of information about solid waste management.

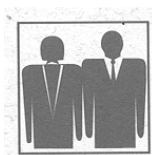
Ecology should establish a statewide database to track waste reduction and recycling.

Ecology should establish, and funding should be provided for, an information clearinghouse.



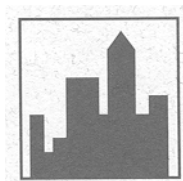
Local Governments

Local governments should have resources sufficient to fulfill their responsibilities for issuing permits and enforcing regulations.



Legislature

The Legislature should request a study to review current and potential sources of financing for solid waste management in Washington, identify where the need for financing exists, and study the implications of any change in the current financial structure. The study should recommend needed changes.



Private Sector

The private sector should support government procurement policies by manufacturing and marketing durable, recyclable products that contain recycled materials.

The private sector should keep all levels of government and citizens informed about their efforts to reduce waste, recycle and use products that contain recycled materials.

Where do we go from here?

This Executive Summary has summarized the State Solid Waste Management Plan. The State Plan itself examines in more detail the future of solid waste management in Washington, identifying needed changes and improvements both in attitudes and in the way solid waste is managed.

Ecology is also currently preparing the Hazardous Waste Management Plan, to be completed in mid-1991. This, with the State Solid Waste Management Plan, will set the direction for the management of all waste in Washington into the 21st Century.

The Washington State Solid Waste Planning Advisory Committee, which was instrumental in developing this plan, will continue, with expanded membership. In addition, Ecology will convene work groups to gather information necessary to update the Plan. This first update, which Ecology has begun, is to be completed by October 1992.

Public participation and review are essential. Public meetings will be held to determine what issues should be addressed in the updated plan. Ecology will also conduct public workshops concerning the draft plan update.

Updating the State Solid Waste Management Plan

Solid waste management in Washington is changing. Waste reduction and recycling are becoming increasingly important as implementation of the Solid Waste Management Act progresses. New information is becoming available, both from studies and committee work in Washington, and from other states and countries. In order for the State Solid Waste Management Plan to remain useful, it needs to evolve by incorporating this new information.

To accomplish this, Ecology will update the State Plan every two years. Updates will build on the current State Plan, assessing the implementation status of its recommendations, and evaluating information currently being provided by, among others, the Washington Packaging Task Force, Eastern Washington University's Enforcement Study, and the Washington Committee for Recycling Markets.

We welcome your comments

Ecology welcomes comments about how to make the State Solid Waste Management Plan optimally useful, and what issues need to be addressed during the updating process. Please use the comment form at the end of this document or send your comments directly to:

- Ellen O. Caywood
Solid and Hazardous Waste Program
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711



*Together we can reach our goals and
enhance our quality of life
for ourselves and future
generations. ■ The choice is up to you.*



Glossary

This glossary is offered to assist readers in understanding terms commonly associated with solid waste management. Not all appear in this Executive Summary. For a more detailed discussion of these terms and of solid waste management in Washington, please see the full text of the State Solid Waste Management Plan.

BULKY WASTE

Large items of refuse including appliances, furniture, large auto parts, non-hazardous construction and demolition materials, trees, branches and stumps, which cannot be handled by normal solid waste collection, processing and disposal methods.

BUY-BACK CENTER

A recycling facility to which individuals bring recyclable materials for payment.

CENTRALIZED WASTE COMPOSTING

A system using a central facility within a politically defined area to compost yard and garden wastes.

COMMERCIAL WASTE

Waste materials generated by wholesale, retail, institutional, or service establishments such as office buildings, stores, markets, theaters, hotels, and warehouses.

COMMINGLED RECYCLABLES

A mixture of several recyclable materials in one container.

CO-COMPOSTING

Simultaneous composting of two or more diverse waste streams.

COMPOST

The stabilized product of composting (controlled biological degradation); a soil fertilizer beneficial to plant growth.

COMPOSTING

The controlled degradation of organic solid waste yielding a product for use as a soil conditioner (WAC 173-304-100).

COMPOSTING, MUNICIPAL

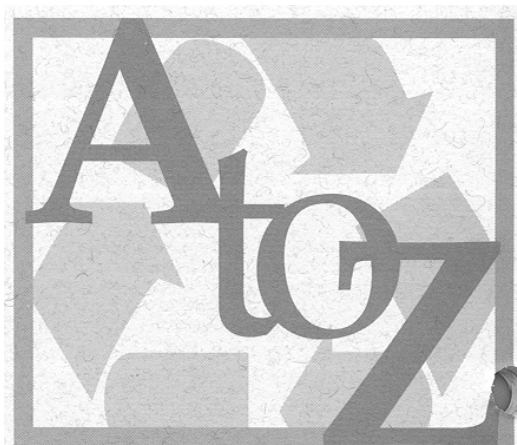
Solid waste management method whereby the organic component of the solid waste stream is biologically decomposed under controlled conditions; an aerobic process in which waste organic materials are ground or shredded and then decomposed to humus in windrow piles or in mechanical digesters, drums, or similar enclosures.

CONSTRUCTION WASTE

Materials resulting from the construction, remodeling, and repair of buildings and other structures. (See also DEMOLITION WASTE.)

CURBSIDE COLLECTION

Recycling programs where recyclable materials are collected at the curb, often from special containers.



DEMOLITION WASTE

Solid waste, largely inert waste, resulting from the demolition of buildings, roads, and other man-made structures. Demolition waste consists of, but is not limited to, concrete, brick, bituminous concrete, wood and masonry, composition roofing and roofing paper, steel and minor amounts of other metals like copper. Plaster (i.e., sheetrock or plaster board) or any other material, other than wood, that is likely to produce gases or a leachate during the decomposition process and asbestos wastes are not considered to be demolition waste for the purposes of WAC 173-304 (WAC 173-304-100). (Please note that this definition does not include treated wood, asbestos, construction waste or land-clearing waste.)

DEWATERED SEWAGE SLUDGE

Sewage sludge with a total solids content of 20% or greater or sewage sludge that can be transported and handled as a solid material.

DISPOSAL

The discharge, deposit, injection, dumping, leaking, or placing of any solid waste into or on any land or water.

DISPOSAL SITE

The location where any final treatment, use, processing, or deposit of solid waste occurs (WAC 70-95-030).

DROP-OFF CENTER

A collection site for recyclable or compostable materials where individuals deposit these materials in designated containers.

DRUM COMPOSTING

Enclosed cylindrical vessel that slowly rotates for a set period of time to break up and decompose organic material.

EMISSION

Discharge of a gas into atmospheric circulation.

ENERGY RECOVERY

A process operating under federal and state environmental laws and regulations for converting solid waste into useable energy and for reducing the volume of solid waste (Chapter 70.95.030 RCW).

FLY ASH

Small, solid particles of ash and soot generated when coal, oil, or waste materials are burned. Fly ash is suspended in the flue gas after combustion and is removed by pollution control equipment.

FOOD WASTE

Residual food from residences, institutions, or businesses, or unusable portions of fruit, animals, or vegetables resulting from food production.

GARBAGE

Unwanted animal and vegetable wastes and animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food of such character and quantity as to attract or feed disease carrying organisms (vectors). Also swill and carcasses of dead animals. Does not include sewage and sewage sludge.

GREEN WASTE

Portion of the municipal waste stream consisting of grass clippings, tree trimmings and other vegetative matter.

HDPE BOTTLES

High-density polyethylene plastic milk and juice containers.

HAZARDOUS WASTE

Includes all dangerous and extremely hazardous waste, as defined in Federal and State of Washington statutes (Chapter 70.105.010 RCW); includes substances composed of both radioactive and hazardous components.

HEAVY METALS

Elements regulated because of their potential toxicity to humans, plants, and animals. Heavy metals include cadmium (Cd), copper (Cu), chromium (Cr), mercury (Hg), nickel (Ni), lead (Pb) and Zinc (Zn).

HIGH GRADE PAPER

Relatively valuable types of paper such as computer printout, white ledger, and tab cards. Also recycled industrial trimmings at paper mills.

**HOUSEHOLD COLLECTION PROGRAMS
(also known as CURBSIDE PROGRAMS)**

The pick-up of recyclables from a household.

INCINERATION

Burning solid waste in an enclosed facility under federal and state environmental regulations so as to reduce the volume of the waste. (Chapter 70.95.030 RCW)

INCINERATOR

Facility in which the combustion of solid waste takes place.

INCINERATOR ASH

The remnants of solid waste after incineration, including non-combustibles (e.g., metals) and soot.

INDUSTRIAL SOLID WASTES

The waste by-products of manufacturing and industrial activities such as scraps, trimmings, packing, and other discarded materials not otherwise designated as dangerous wastes under chapter (WAC 173-304-100).

INERT WASTES

Noncombustible, nondangerous solid wastes that are likely to retain their physical and chemical structure when disposed of. Characteristics of inert wastes include resistance to biological attack and chemical attack by acidic rainwater (WAC 173-304-100).

INORGANIC WASTE

Waste which does not originate from plants or animals.

INSTITUTIONAL WASTE

Waste generated by schools, hospitals, prisons, research institutions and other public buildings.

INTEGRATED SOLID WASTE MANAGEMENT

A practice of using several waste management techniques to manage and dispose of specific components of the municipal solid waste stream. Waste management alternatives include source reduction, recycling, composting, energy recovery, incineration and landfilling.

LAND CLEARING DEBRIS

Leaves, grass, prunings, brush and stumps resulting from clearing land.

LANDFILL

A disposal facility or part of a facility where solid waste is permanently placed in or on land and which is not a land treatment facility (Chapter 70.95.030 RCW) (WAC 173-304-100).

LEACHATE

Water or other liquid contaminated by solid waste or associated gases (WAC 173-304-100).

LEGISLATIVE AUTHORITY

The city or county commission/council or special purpose governmental agency responsible for solid waste planning and management.

LOCAL GOVERNMENT

A city, town, or county (Chapter 70.95.030 RCW).

MANDATORY RECYCLING

Programs which by law require citizens to separate recyclable materials from trash so that these materials are not burned or dumped in landfills.

MEDICAL WASTE

All the infectious and injurious waste originating from medical, veterinary, or intermediate care facilities (WAC 173-304-100).

METHANE

An odorless, colorless, flammable, and explosive gas produced when organic wastes such as those contained in municipal solid waste undergo anaerobic decomposition. Methane is generated in municipal solid waste landfills and anaerobic compost processes.

MINIMUM FUNCTIONAL STANDARDS

WAC 173-304, Minimum Functional Standards for Solid Waste Handling; technical environmental control and protection standards governing the handling and disposal of solid waste in Washington state.

MIXED WASTE PAPER

Low-grade, potentially compostable paper, including noncorrugated paperboard, paperback books, telephone books, paper towels, and paper food containers.

MODERATE-RISK WASTE

(a) Any waste that exhibits any of the properties of hazardous waste but is exempt from regulation under Chapter 70.105.010 RCW solely because the waste is generated in quantities below the threshold for regulation, and (b) any household wastes which are generated from the disposal of materials identified by the Department of Ecology as hazardous household substances (Chapter 70.105.010 RCW).

MSW COMPOSTING

Municipal Solid Waste Composting—the controlled degradation of municipal solid waste. The MSW composting process includes the removal before composting of nonbiodegradable inorganic materials.

MUNICIPAL SOLID WASTE (MSW)

Municipal solid waste consists of residential, commercial, and institutional solid waste.

NIMBY

Acronym for “Not In My Back Yard”—an expression of citizen opposition to the siting of what is seen as an undesirable facility based on opposition to the use of a particular location.

OPEN DUMP

A land disposal site without environmental safeguards where solid waste is dumped but not covered and is sometimes burned.

ORGANIC

Characteristic of, pertaining to, or derived from living organisms; pertaining to a class of compounds of carbon.

ORGANIC CONTAMINANTS

Include pesticides and polychlorinated biphenols (PCBs), fuels, solvents, resins and others.

ORGANIC MATTER

That component of the soil that includes living and dead microscopic plants and animals and residual decomposition products of plant and animal tissue; any carbon assembly (exclusive of carbonates), large or small, dead or alive, inside soil space; consists primarily of humus.

ORGANIC WASTE

Waste material containing carbon. The organic fraction of municipal solid waste includes paper, wood, food wastes, plastics, and yard wastes.

PARTICULATES/PARTICULATE MATTER

Tiny pieces of matter resulting from combustion that may harm the health of those who breathe them.

PARTICIPATION RATE

A measure of the number of people participating in a recycling program compared to the total number eligible to participate; with curbside recycling programs, participation rate is measured by the percentage of eligible participants who set out recyclables for collection during a specified period of time.

PATHOGEN

An organisms, chiefly microorganisms, including viruses, bacteria, fungi, and all forms of animal parasites and protozoa, capable of producing an infection or disease in a susceptible host.

PERMIT

An authorization issued by a jurisdictional health department which allows a person or company to handle and manage solid waste at a specific location and which includes specific conditions for facility operations (WAC 173-304-100).

PET

The type of plastic (polyethylene terephthalate) from which 2-liter pop and liquor bottles are made.

pH

A value indicating the degree of acidity or alkalinity; pH7 = neutral, pH = acid, pH7 = alkaline.

PLANNING AREA OR JURISDICTION

The geographical location designated by a local solid waste management plan as the plan's legal boundaries.

POST CONSUMER RECYCLING

The reuse of materials separated from residential and commercial waste; does not include recycling of material that has not reached the consumer, such as glass broken in the manufacturing process.

PROCESSING

Preparing waste/recyclable materials to serve as feedstock; may include sorting, grinding, and shredding; an operation to convert a solid waste into a useful product or to prepare it for disposal (WAC 173-304-100).

PROCUREMENT

The process governments and businesses use to purchase a particular product, or commodity.

PUBLIC INTEREST GROUP

An organization which reflects a civic, social, recreational, environmental, or public health perspective and which does not directly reflect the economic interests of its membership. It is not a trade association or an organization whose purpose is to promote business interests, such as the Chamber of Commerce.

PUTRESCIBLE WASTE

Organic materials prone to degrade rapidly, giving rise to obnoxious odors.

RECYCLABLE MATERIALS

Those solid wastes that are separated for recycling or reuse, such as paper, metals, and glass; materials that are identified as recyclable by a local comprehensive solid waste management plan. Prior to the adoption of the local comprehensive solid waste plan, local governments may identify recyclable materials by ordinance.

RECYCLING

Transforming or remanufacturing waste materials into usable or marketable materials or products.

RESIDUAL WASTE

Materials remaining after recycling, processing, composting or incineration. Residues are usually disposed of in landfills.

RESOURCE RECOVERY

The extraction and use of materials and energy from the waste stream. The term is sometimes used to denote solid waste incineration with energy recovery, also called waste-to-energy incineration.

REUSE

Use of a product more than once in the same form for the same purpose; e.g., a soft-drink bottle is reused when it is returned to the bottling company, cleaned and refilled.

SANITARY LANDFILL

Solid waste disposal site located, designed and operated to minimize environmental degradation including water pollution from runoff and leaching, and air pollution from the uncontrolled emission of landfill gases such as methane. Waste is compacted, and covered with soil each day to discourage pests, control disease and minimize visual blight and air and water pollution.

SCAVENGER

One who illegally removes materials at any point in the solid waste management system.

SCRAP

Discarded or rejected industrial waste material often suitable for recycling.

SCREENING

The passing of compost through a screen to remove large inorganic particles and improve the consistency and quality of the end product.

SCRUBBER

Common anti-pollution device that uses a liquid or slurry spray to remove acid gases and particulates from the flue gases produced when municipal solid waste is incinerated.

SECONDARY MATERIAL

Material that is used in place of a primary or raw material ("virgin material") in manufacturing a product.

SELF-HAUL

Waste hauling by the waste generator rather than by a contracted hauler.

SEPTAGE

A semisolid generated by septic tank systems that consists of settled sewage solids combined with varying amounts of water and dissolved materials (WAC 173-304-100).

SHREDDER

Mechanical device used to break up waste materials into small pieces.

SLUDGE

A semisolid substance consisting of settled solids combined with varying amounts of water and dissolved materials generated by a wastewater treatment plant or other source (WAC 173-304-100).

SOLID WASTE or WASTES

All putrescible and nonputrescible solid and semisolid wastes, including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, abandoned vehicles or parts thereof, and recyclable materials (Chapter 70.95.030 RCW). This includes all liquid, solid, and semisolid materials which are not the primary products of public, private, industrial, commercial, mining, and agricultural operations. Solid waste also includes sludge from wastewater treatment plants and septage from septic tanks, woodwaste, dangerous waste, and problem wastes (WAC 173-304-100).

SOLID WASTE HANDLING

The management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from solid wastes, or the conversion of the energy in solid wastes to more useful forms (Chapter 70.95.030 RCW).

SOURCE REDUCTION

The design, manufacture, acquisition, and reuse of materials so as to reduce the quantity and toxicity of waste produced at the place of origin. Source reduction is also achieved by careful buying.

SOURCE SEPARATION

The separation of different kinds of solid waste at the place where the waste originates (Chapter 70.95.030 RCW); separating recyclable materials from wastes at the point of waste generation.

SPECIAL WASTE

Items that require special or separate handling, such as household hazardous wastes, bulky wastes, tires, and used oil..

STACK EMISSIONS

Air emissions from combustion facility stacks.

SUBTITLE C

Hazardous waste section of the Federal Resource Conservation and Recovery Act (RCRA).

SUBTITLE D

Solid, non-hazardous waste section of the Federal Resource Conservation and Recovery Act (RCRA).

SUPERFUND

Common name for the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to clean up abandoned or inactive hazardous waste sites.

TECHNICAL ASSISTANCE

Technical information and guidance provided by the state to local governments or individuals to aid in complying with laws and regulations.

TIPPING FEE

The price paid per cubic yard or other measurement to dispose of waste at a transfer station, incinerator, or landfill.

TOXICITY

The quality or degree of being poisonous; adverse biological effect due to toxins and other compounds.

TRANSFER STATION

A permanent facility where wastes are collected for transport by truck, railroad or barge to final disposal. Recycling and some processing may also take place at transfer stations.

TRASH

Material considered worthless, unnecessary or offensive that is usually thrown away. Generally defined as dry waste material, but in common usage it is a synonym for garbage, rubbish, or refuse.

USED OIL

Oil which through use, storage, or handling has become unsuitable for its original purpose due to the presence of impurities or the loss of original properties.

VARIABLE CAN OR CONTAINER RATE

A charge on a sliding scale for solid waste services based on the volume of waste generated measured by the number of containers set out for collection; the more waste set out, the higher the charge.

VECTOR

An animal or insect that transmits a disease-producing organisms, including rats, mice, and mosquitos.

VOLUME REDUCTION

Reducing the volume of waste after the waste has been generated by using such techniques as baling, shredding, compacting, and incinerating.

WASTE EXCHANGE

A computer and catalogue network that redirects waste materials back into the manufacturing or reuse process by matching companies generating specific wastes with companies that use those wastes as manufacturing inputs.

WASTE REDUCTION

Reducing the amount or toxicity of waste or reusing materials (Chapter 70.95.030 RCW).

WASTE STREAM

The total flow of solid waste from homes, businesses, institutions and manufacturing plants that must be recycled, burned, or disposed of in landfills; or any segment thereof, such as the "residential waste stream" or the "recyclable waste stream."

WATER TABLE

The level below the earth's surface at which the ground becomes saturated with water. Landfills and composting facilities that meet the Minimum Functional Standards are designed to protect the water table from contamination.

WHITE GOODS

Used major household appliances such as washers, dryers, and refrigerators.

WINDROW SYSTEM

A large scale composting system in which rows of waste mixed with a bulky agent such as sawdust are aerated by mechanical turning by a front-end loader or specially designed equipment.

WOODWASTE

Solid waste consisting of wood pieces or particles generated as by-products or waste by the manufacturing of wood products or the handling and storage of raw materials. These include, but are not limited to, sawdust, chips, shavings, bark, pulp, hog fuel, and log sort yard waste, but does not include wood pieces or particles containing chemical preservatives such as creosote, pentachlorophenol, or copper-chrome arsenate. Woodwaste also includes unusable trees and stumps (WAC 173-304-100).

YARD WASTE

Grass clippings, leaves and weeds, and prunings from residences or businesses.